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TM-1088 001 00

Business Management Game, Part II

Instructions for Umpires

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TM-1088/001/00

TECHNICAL MEMORANDUM

(TM Series)

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Business Management Game, Part II

Instructions for Umpires

DEVELOPMENT

SYSTEM

CORPORATION

2500 COLORADO AVE.

SANTA MONICA

CALIFORNIA

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May 15, 1963

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TM-1088/001/00

PREFACE

This document describes in detail the operations to be performed by the umpires in the play of the management game described in TM-1088/000/00. Although the umpiring instructions have been somewhat modified, the game is based on the Andlinger-Green game as described by G. R. Andlinger in the Harvard Business Review for March and April, 1958.

The authors wish to thank the many people who were instrumental in developing these instructions for use in the Business Management Game held at System Development Corporation in cooperation with the Santa Monica Chamber of Commerce on February 16, 1963. Particular thanks to Robin Brooks, Jack Kagdis, Patricia Kenney and Seymour Rosner.

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1. GENERAL

1.1 RESPONSIBILITIES

The umpires are responsible for implementing the decisions of the Boards of Directors of all the teams playing, and for providing the environment for the game. If desired, the umpiring function may be broadened to include the performance of the accounting function for the teams playing the game. The umpiring duties may be assigned to several people as needs indicate.

1.2 FUNCTIONS

The umpires are responsible for a group of activities which can be broken down into six areas. They are:

1.2.] Market

The activities associated with the market are:

- a. Arraying the market initially.
- b. Reducing the customer's potential as a result of sales.
- c. Updating the market for the next quarter.

1.2.2 Costs

The umpiring duties involving costs include checking the costs of various decisions as well as assigning costs not determined by the players. They are:

- a. Checking costs and computations on the quarterly Report form,
- b. Assigning fixed and variable costs depending on production capacity and units in Work Process.
- c. Preparing the Quarterly Report for the next quarter.

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1.2.3 Sales

The functions performed by the umpires which fall in the general category of sales are:

- a. Determining product improvement on the basis of R and D investment.
- b. betermining sales probability based on advertising and product improvement.
- c. Determining cales.
- d. Splitting sales if more than one company sells a customer.

1.2.4 Personnel

The activities of the umpires in the area of personnel are two-fold. They are:

- a. Determining salesman losses.
- b. Checking salesman assignments.

1.2.5 Conculting

The umpires must provide consulting services for the players when they communicate their decision to purchase it by indicating its cost on the Quarterly Report.

1.2.6 Accounting

Performance of the accounting function requires the computation and preparation of the two financial statements traditionally used by business firms. These are:

- a. The Profit and Loss or Income Statement, reflecting the financial impact of events which have taken place (or have been recognized during the previous time period);
- b. The Balance Sheet or Statement of Position, reflecting the current position of the Company. Balance sheets are, in fact, a summation of all past Profit and Loss Statements and are computed as of the end of the time period covered by the last Income Statement.

1.3 ALLOCATION OF FUNCTIONS

The various functions performed by the umpires may be allocated in any convenient way. It is estimated that one umpire will be needed for every two teams playing.

2. STARTING POSITION

The starting position of the corporations at the beginning of play may vary, but in every case the position must be indicated on the starting Quarterly Report. The game may begin with corporations which have been operating for any length of time. Preparations have been made, however, for the teams to begin either as new corporations, or as corporations which have been operating for 19 quarters, with new management beginning in quarter 20.

2.1 NEW CORPORATION

When the game begins with all corporations just starting in business, the first Quarterly Report will indicate only Beginning Cash. The teams begin with \$400,000 Available Cash.

If the accounting function is being implemented, the teams are provided with only a Statement of Position, dated Beginning Quarter 1 and showing the \$400,000 cash balance as the sole asset.

2.2 NEW MANAGEMENT OF OLD CORPORATION

When the game begins with the players assuming control of a corporation which has been operating for some length of time, the following must be provided for each team member.

2.2.1 Company History

The umpires must provide the team members with a history of the operation of the corporation which they will be controlling. The Quarterly Reports for quarters 1 through 19 (Appendix I) provide this information for games beginning at quarter 20. For corporations beginning at later points in time, a summary would probably be sufficient.

2.2.2 Quarterly Report

The team must be provided with the Quarterly Report for the first quarter which they are to play. This should show the beginning cash position of the corporation at the start of the quarter. A Quarterly Report for quarter 20 can be found in Appendix II.

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2.2.3 Game Board

The umpires should provide the new Board of Directors with a game board showing the position of the corporation at the beginning of the first quarter of play. See Appendix III for the game board configuration for quarter 20.

2.2.4 Financial Statement

If financial statements are to be provided to the teams, past statements form part of the company history and are provided with the past Quarterly Reports (See Appendix VII for statements for quarters 1 through 19). A Statement of Position should be provided for the first quarter of play. The Statement of Position for the beginning of quarter 20 can also be found in Appendix VII.

3. MARKET

The activities concerned with the market are performed once each quarter with the exception of the initial arraying of the market, which is performed only once, before play begins.

3.1 DESCRIPTION

The market is composed of 24 customers, located in four marketing regions. Each customer has a "buying potential" of a certain number of motors produced by the corporations which are competing for his business. This "buying potential" begins at a certain level and may increase or decrease from quarter to quarter.

3.1.1 Increase

The buying potential of a customer may increase as a result of the growth of the market. At the beginning of each quarter of play, the total buying potential of the market will increase by a given amount. The potentials of some customers may increase by more than one unit, while that of others may not increase at all.

3.1.2 Decrease

The buying potential of a customer may decrease as a result of two conditions:

- a. The purchase of one or more units.
- b. A depression of the entire market.

In the first case, the buying potential of the customer is reduced by the number of units he purchased. His potential may later increase as a result of market growth. In the second case, the entire market has a reduced potential for one quarter as a result of a market depression. In this case, some customers may lose more than one unit of potential, while others may not lose any.

3.2 INITIAL ARRAY

A form is provided for the use of the umpire in arraying the market for each quarter of play (See Appendix IV). The market array for the beginning of the game depends on the number of teams playing, as well as the quarter in which the play begins.

3.2.1 New Corporation

When the game begins with the teams assuming control of new corporations, each team begins with \$400,000 and no other assets. Because of the time lag required to build a plant and to hire and train salesmen, the corporations will not be in a position to send salesmen into the market for a minimum of 5 quarters. The following steps should be taken to array the market for quarter 5:

- a. Select a starting position and a direction in the random number table. See Table I, Appendix VI.
- b. Consult the random numbers in the sequence selected until a number is found which lies between 1 and 24.
- c. Assign a buying potential of one to the customer whose number was found in the random number table.
- d. Repeat b and c until the total buying potential assigned is equal to 7 times the number of teams playing.

3.2.2 New Management of Old Corporation

When the game begins with the teams assuming management of an old corporation the teams begin with assets accrued by the old corporation during its prior quarters of existence. In addition, the market must reflect, to a certain extent, the fact that several quarters have elapsed. The following steps should be taken to array the market for games beginning after quarter 1:

- a. Select a starting position and a direction in the random number table.
- b. Consult the random numbers in the sequence selected until a number is found which lies between 1 and 24.
- c. Assign a buying potential of one to the customer whose number was found in the random number table.
- d. Repeat b and c until the total buying potential assigned is equal to 17 times the number of teams playing.

3.3 REDUCTION AS A RESULT OF SALES

When, during the umpiring operations, sales are determined, the buying potential of a customer is entirely or partially consumed by sales, the potential should be reduced by the number of units sold to him. (See 5.3 % 5.4 on sales).

3.4 UPDATING FOR NEXT QUARTER

When all sales have been determined, and the potentials of the individual customers have been reduced accordingly, the market must be updated to prepare for the next quarter. The market for this game is a gradually growing one, but is subject to an occasional depression. The steps to be taken to prepare the market for the next quarter are:

3.4.1 Determination of Depression

To determine whether or not a depression will occur, the umpire should do the following:

- a. Consult the next number in the random number table, according to the sequence established.
- b. If the last quarter was not a depression, and the number found is 5 or less, a depression will occur.
- c. If the last quarter was a depression, and the number found is 10 or less, a depression will occur.
- d. If no depression is indicated by the foregoing, the market will grow.

3.4.3 Depression

If a depression has been indicated by the process listed above, the new market should be prepared as follows:

- a. For each unit of buying potential remaining in the market after the last quarter, select the next number in the random number table.
- b. If the number found is 50 or less, remove the unit from the buying potential.
- c. Repeat a and b until all units have been processed.

3.4.3 Growth

If a depression was not indicated by the process listed in section 3.4.1, the new market should be prepared in the following manner:

- a. Consult the random number table in the sequence established until a number is found which lies between 1 and 24.
- b. Add one unit of buying potential to the customer whose number was found in the random number table.
- c. Repeat a and b until the total number of units added to the market is equal to 7 times the number of teams playing.

4. COSTS

The umpiring activities concerned with costs are performed each quarter for each team. They are associated with the Quarterly Report form which is given to the umpire by the team members when they have completed their Board of Directors meeting and have entered all their decisions on the form.

4.1 CHECKING COSTS AND COMPUTATIONS

The umpires are responsible for checking the accuracy of the computations on the Quarterly Report form. In addition to verification of the arithmetic performed by the team members, the umpires should perform certain "cross checking" tasks.

4.1.1 Current Factoring

The factoring specifications of the Board of Directors should be checked against a game board representing the position of the team to insure that the team does not factor beyond its capacity to do so. The correct values for cash to be realized and expense due to factoring are given in Table II, Appendix VI.

4.1.2 Disbursements

The following information listed under Disbursements should be verified:

- a. Fixed and variable costs (if the team members have filled these in) should be checked against the game board and Table III, Appendix VI to insure that they are correct.
- b. Sales salaries should be checked against the game board to verify the number of salesmen to be paid.
- c. R % D should be checked to insure that multiples of \$5,000 have been allocated.
- d. Advertising expense should be checked to insure that the players have correctly computed total pages of ads.

- e. Consulting fees should be checked to insure that the total consulting fees were properly computed in the upper right-hand section of the Quarterly Report and that this total was correctly carried over into the Disbursements column.
- f. The total of the disbursements should be verified.

4.2 ASSIGNING FIXED AND VARIABLE COSTS

If the team members have not supplied the Fixed and Variable costs in the Disbursements column of the Quarterly Report, these should be provided by the umpires. Fixed Cost is based on the number of production lines owned by the corporation. Variable Cost is based on the number of production lines and on the number of units in Work in Process during the current quarter. Both Fixed and Variable Cost can be found in Table III.

4.3 PREPARING NEW QUARTERLY REPORT

The umpire is responsible for preparing a new Quarterly Report form for each team for the next quarter of play. The Starting Cash items in the upper left-hand corner of the Quarterly Report must be completed by the umpire.

4.3.1 Beginning Cash

Beginning Cash is equal to the total Starting Cash from the previous quarter minus the total Disbursements from the previous quarter.

4.3.2 Matured A/R

The number of units which reached the "Cash" block on the game board during the past quarter should be entered; the total value of these A/R's at \$10,000 each should also be entered.

4.3.3 Previous Factored A/R

The amount of the total Factored A/R's from the previous quarter should be entered in this position.

4.3.4 Total

The total of the Starting Cash items should be entered here. (See Appendix II).

5. SALES

The umpiring functions which deal with the determination of sales or which affect the determination of sales must be performed each quarter for each team.

5.1 PRODUCT IMPROVEMENT

Before the sales made by a corporation can be determined, it is necessary to determine whether the corporation achieved a product improvement.

5.1.1 Accumulated R & D

The accumulated R & D investment of a corporation must be computed in order to determine whether the corporation has achieved a product improvement. The accumulated R & D investment is equal to the accumulated R & D for the previous quarter plus the investment made for this quarter in R & D. If the investment for the current quarter is zero, accumulated R & D is also zero.

5.1.2 Product Improvement

In order to determine whether a product improvement has been achieved, the following steps must be taken:

- a. Consult Table IV to determine the probability of achieving a product improvement, based on accumulated R & D investment.
- b. Consult the next number in the random number table.
- c. If the number found in the random number table is less than or equal to the probability found in Table IV, a product improvement has been achieved. If not, no product improvement is achieved.

5.1.3 Results of Product Improvement

If a product improvement is achieved, the following results are produced:

- a. The accumulated R & D investment for the corporation is reduced to zero.
- b. The probability of making sales for the corporation is increased by 10 for all market regions and for all subsequent quarters of play until such time as all teams have achieved a product improvement; at this time, the probability of sales for every team is reduced by

5.1.4 Documentation

The umpires must indicate to the team members whether a product improvement has or has not been achieved. The following must be entered on the Quarterly Report:

- a. Accumulated R & D (page 2 of the Quarterly Report) is zero if a product improvement was achieved, or if no R & D investment was made in this quarter. Otherwise, the accumulated R & D computed at 5.1.1 is entered here.
- b. The achievement of a product improvement must be indicated immediately below the accumulated R & D on page 2 of the Quarterly Report. Check appropriate box.

5.2 SALES PROBABILITY

The probability for making a sale for each company may vary from region to region in the market, depending on the advertising the corporation has done in a region during the quarter. The overall sales probability also depends on the prior achievement of a product improvement.

5.2.1 Basic Sales Probability

The basic sales probability for each corporation for each region of the market is 25.

5.2.2 Product Improvement

Each product improvement achieved by a corporation raises the sales probability for that corporation by 10. The increase in probability is effective for all market regions, beginning in the quarter in which the improvement was achieved, and continuing until such time as all teams have achieved product improvements; when this occurs all teams lose their increase. (See section 5.1.3).

5.2.3 Advertising

Advertising increases the sales probability for a team only in the quarter during which the advertising is done, and in the region in which it is done. The increase depends on the number of pages of ada, and can be found in Table V, Appendix VI.

5.3 SALES MADE

Having computed the sales probabilities for each corporation for each region, the umpire is able to determine whether the sales calls designated by the corporation resulted in sales.

5.3.1 Individual Corporation

Consulting the Quarterly Report for each team independently, the umpire should perform the following operations:

- a. For each sales call indicated by the team, consult the next number in the random number table.
- b. If the number found in the random number table is less than or equal to the sales probability for the team being considered for the region in which the sales call is made, then a sale is made. If the random number is larger than the sales probability, no sale is made.
- c. If a sales call produces a sale as indicated in b, indicate the team number in the correct customer box on the umpire's market form (Appendix IV).
- d. If a team indicates more than one call on a single customer, and one of the first calls produces a sale, all subsequent calls by the team on that customer should be ignored.

5.3.2 All Corporations

Once the umpire has determined the sales made by the individual corporations, he is prepared to determine how many units were sold to each customer by each team. In those cases where only one team made a sale to a particular customer, the following procedure will provide this information to the umpire and to the team:

- a. Select a team.
- b. Consulting the market form, locate a customer to whom sales were made by this team only.
- c. Assign all of the buying potential of this customer to the team being considered.
- d. Enter the buying potential of this customer in the small box in the upper left-hand corner of the customer's box on the Quarterly Report team.
- e. Reduce the customer's buying potential to zero on the market form.
- f. If these sales cause the total sales for this team to exceed the number of units the team has in inventory, assign only as many sales to this customer as will completely deplete the inventory of this team. Reduce the buying potential of the customer by only this number, and negate all subsequent sales by this team which may be indicated on the market form.
- g. Repeat b through f for all sales indicated for the team selected.
- h. Repeat a through g for all teams.

5.4 SPLIT SALES

After the individual sales of each team have been determined, if sales have been made by more than one team to a customer or customers, and the teams involved still have units left in inventory to sell, split sales may be determined.

5.4.1 Sales Which Split Equally

For those customers whose buying potential can be split equally among the corporations who have made sales to them the following procedure should be performed:

- a. Assign equal parts of the buying potential of the customer to each of the teams making the sale.
- b. Indicate the sales in the small box in the upper left of the customer box on the teams' Quarterly Reports.
- c. Reduce the buying potential of the customer to zero.
- d. If any of the sales cause the inventory of the team involved to be depleted beyond zero, assign only as many sales to the team as will reduce the inventory to zero, splitting the remaining units among the other teams who made sales to the customer.
- e. Repeat a through d for each customer to whom multiple sales were made.

5.4.2 Sales Which Do Not Split Equally

If at any point the buying potential of the customer does not split equally among the teams who have sold to the customer, the following procedure should be undertaken:

- a. Determine whether one of the teams has a superior sales probability in the region in which the customer resides.
- b. If a team is found which has a superior sales probability, assign the extra sales to that team.
- c. If no team is found which has a superior sales probability, do not assign the extra buying potential of the customer to any team.

5.5 DOCUMENTATION

When all sales have been determined, the umpire may document these sales on the Quarterly Report and on the board representing the positions of the teams.

5.5.1 Quarterly Report

The umpire should determine the total number of sales made by each team, and enter this quantity at the top of page 2 of the Quarterly Report for the team, on the "Units Sold" line.

5.52 Game Board

The umpire should update the game board for the team according to the instructions found in volume zero of this document. This will provide the umpire with the information necessary to complete the "Units in Inventory" and "Units in Work in Process" items on page 2 of the Quarterly Report.

6. PERSONNEL

In the area of personnel, the umpire has two general responsibilities. They must be performed each quarter for each team.

6.1 SALESMAN LOSSES

The game being played provides that salesmen, once hired, may "quit" or retire from the corporation. They may do so at any stage in their career with the corporation.

6.1.1 Procedure

To determine which salesmen, if any, quit during a quarter the umpire should follow the procedure indicated below:

- a. For each salesman in each block on the game board, select a number (the next number) in the random number table.
- b. If the number found in the random number table is less than or equal to 5, the salesman quits.
- c. If the number found is larger than 5, the salesman remains with the corporation.

6.1.2 Documentation

The umpire must make several entries on the Quarterly Report with respect to personnel. They are:

- a. Previous salesmen, on page 2 of the Quarterly Report is equal to the number of salesmen employed with the corporation when the quarter began.
- b. Salesmen hired is indicated by the team under Disbursements on page 1 of the Quarterly Report. This number should be carried over to this item.
- c. The number of salesmen lost as a result of the umpiring activities listed above should be entered on the correct line of the Quarterly Report. For example, when a salesmen are lost from block 3 of training, the number 2 should be entered on the "Block 3" line under "Salesmen Remaining". The salesmen should also be removed from their respective blocks on the game board.
- d. The Total Remaining Salesmen is equal to the total of the previous salesmen and the salesmen hired minus the total of the salesmen lost.

6.2 SALESMAN ASSIGNMENTS

The assignment of salesmen to call on customers must be verified by the umpire before sales are determined. Only the salesmen in the "field" block on the game board may make sales calls. The number of calls they may make depends on the region in which they are operating.

6.2.1 Rural Regions

Each salesman assigned to a rural region (customers ? through 21, regions II, III, and the top of region IV) may make only one sales call.

6.2.2 Urban Regions

Salesmen assigned to urban regions are permitted two calls each, but these calls must be made to the same or to two adjoining customers. The urban customers are 1 through 6, region I, and 22 through 24, the bottom or region IV.

7. CONSULTING

The umpires are responsible for providing consulting information to the team members when it has been requested. The information requested should be returned to the team members with the completed Quarterly Reports, at the beginning of the next quarterly meeting. Forms are provided in Appendix V.

7.1 TOTAL MARKET POTENTIAL

When this information is requested, the response should apply to the next quarter of play. Since this is the case, the umpire must make up the market for the next quarter before he can complete the required form. The information to be provided is the total buying potential of all the customers in the market. Page 1 of Appendix V is a sample of the form (C-1) to be used. Fill in the team number and the total market potential.

7.2 INDIVIDUAL POTENTIAL

This information should also apply to the next quarter of play, and therefore also requires that the market be prepared for the next quarter. Using the form (C-2) on page 2 of Appendix V, the umpire should fill in the team number, and the potential of each of the customers in the region specified by the team.

7.3 PERCENT OF INDUSTRY SALES

This information, which should be provided on the form (C-3) supplied on page 3 of Appendix V, can be computed using information found on the market forms for the past 4 quarters. In the upper left-hand corner of the market form there is an area provided for recording the sales achieved by each team for the quarter, and the total of those sales. Using the market forms for the quarter just played and the three quarter preceding it, compute the total sales made, and the total sales made by the company requesting the information. Divide the company's sales by the total sales and enter the result, along with the team number, on the form.

7.4 COST OF NEW LINE(S)

Providing this information requires that the umpire determine the current plant and production lines owned by the company. Add to this the number of lines specified by the team on the request for this service, and look the total up in Table III, Appendix VI. Enter the team number and the values for Fixed Cost and Variable Cost found under one unit in WIP for total number of Production Facilities on the form (C-4) provided at page 4 of Appendix V.

7.5 INDUSTRY R & D EXPENDITURE

To provide this information, the umpires must review the Quarterly Reports for all teams for the quarter just played and the 3 quarters preceding it. Determine the total expenditure and enter it and the team number on the form (C-5) found on page 5 of Appendix V.

7.6 IMPROVED SALES PROBABILITY

This is the simplest consulting service the umpire can provide. Enter the team number on the form (C-6) on page 6 of Appendix V.

8. INCOME STATEMENT

Since the Income Statement reflects operations of the period just ended, data for its preparation comes, in general, from the quarterly Report after it has been processed by the umpires for return to the participating teams.

8.1 SALES

The dollar amount of Sales is computed by multiplying the Units Sold item (from the Quarterly Report) by \$10,000, the unit price.

8.2 COST OF GOODS SOLD

The computation of this cost requires several steps, namely:

8.2.1 Beginning Inventory

The Beginning Inventory is copied from either the Ending Inventory item of the previous Income Statement or the Inventory item of the last Statement of Position.

8.2.2 Production

The Production figure is the sum of the Fixed and Variable Costs shown on the Quarter 1 Report for the current quarter.

8.2.3 Total Available

The Total Available item is the sum of Beginning Inventory and Production.

8.2.4 Ending Inventory

The Ending Inventory is computed by multiplying the Total Available item by a fraction whose denominator is equal to the sum of the Units in Inventory item and the Units in WIP item from the Quarterly Report for the quarter previous to the one for which the Income Statement is being calculated. The numerator of the fraction is equal to the denominator minus the Units Sold item used in computing Sales (8.1).

8.2.5 Total Cost of Goods Sold

Ending Inventory is subtracted from Total Available and the result entered in the right hand column as Total Cost of Goods Sold.

8.3 GROSS MARGIN

The Gross Margin is the difference between the Sales dollar item and the Total Cost of Goods Sold.

8.4 EXPENSES

Expense items are found on the Quarterly Report under Disbursements. The two categories are not, however, identical. Manufacturing costs have been treated above, and expenditures on Construction are simply a change in the form of assets held and do not produce income. Other Disbursements correspond one for one to items listed on the Income Statement under Expenses.

The writeoff of the Scrapped Production Lines item is a typical, in that it involves no current cash expenditure. When a team indicates a decision to scrap one or more production lines, it will move to a new cost schedule in the quarter following (TM-1088/000/00, Section 6.2.6).

The first time the new schedule is in use (Section 4.1.2.a) the product of \$30,000 and the number of lines scrapped is entered as the Writeoff of Scrapped Production Lines.

All items detailed under Expenses are summed and entered in the right hand column as Total Expenses.

8.5 NET PROFIT

The difference between Gross Margin and Total Expenses is entered as Net Profit. If Total Expenses is greater than Gross Margin, the absolute value of the difference is entered, within parentheses, and the word Profit is struck out and replaced by Loss.

9. STATEMENT OF POSITION

The Statement of Position is prepared following the Income Statement. Items within it are computed as follows:

9.1 CASH

The Cash item is the same as Starting Cash on the Quarterly Report for the upcoming quarter of play.

9.2 ACCOUNTS RECEIVABLE

The Accounts Receivable item is computed by adding the previous quarter's Accounts Receivable item to the Sales item on the Income Statement just computed, and subtracting the sum of Matured Accounts Receivable, Previous Factored Accounts Receivable (both from the Quarterly Report referred to in Section 9.1), and the total Factoring Expense (from the Quarterly Report of the quarter just ended).

9.3 INVENTORY

The Inventory item is copied from the Ending Inventory item on the most recent Income Statement.

9.4 PLANT

The Plant item is the sum of the Plant item from the previous Statement of Position and the Construction disbursement from the most recent Quarterly Report minus the Writeoff of Scrapped Production Lines from the most recent Income Statement.

9.5 TOTAL ASSETS

The Total Assets item is the sum of the four asset items just described. As a cross check, the Total Asset amount minus the Net Profit or plus the Net Loss should equal the Total Assets item on the previous Statement of Position.

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9.6 EQUITY

The Equity item is the same as the Total Assets.

10. EQUIPMENT

The umpires should have the following equipment:

10.1 GAME BOARDS

The umpires should be equipped with game boards and sufficient chips to represent the position of each team.

10.2 FORMS

The umpires should have the following forms available to them:

10.2.1 Quarterly Report Forms

Sufficient Quarterly Report forms should be available for all the quarters to be played. The quarterly report forms are available in colors so that the teams may be more easily distinguished from each other.

10.2.2 Market Forms

The umpires should have sufficient market forms for the quarters to be played.

10.2.3 Consulting Forms

The umpires should be provided with a supply of the six consulting forms, sufficient for the length of play to be undertaken.

10.3 TABLES

The umpires should each have copies of the tables provided in Appendix VI.

11. SEQUENCE

The sequence of activities to be followed by the umpires is as listed in this section. References made are to other sections of this document which describe the particular function in greater detail.

Umpiring	Activities	References
11.1 BE	FORE PLAY BEGINS	
11.1.1	Array the market Set up game boards	Section 3.2
	a. Quarter 1 boards are empty. b. Quarter 20	Appendix III
11.2 AF	TER BOARD MEETING	
	Check costs and computations Assign fixed and variable costs Determine accumulated R & D Determine product improvement Determine sales probabilities Determine sales Determine split sales Document sales Record team decisions on board a. Current factoring b. Construction c. Salesman hire d. Units scheduled e. Production lines scrapped	Section 4.1 Section 4.2 Section 5.1.1 Sections 5.1.2 - 5.1.4 Section 5.3 Section 5.4 Section 5.5 TM-1088/000/00, Section 1
11.2.11 11.2.12 11.2.13 11.2.14 11.2.15	Complete consulting forms Complete and check QR Prepare QR for next quarter	Section 6.1.1 Section 6.1.2 TM-1088/000/00, Section 7 Section 7 Section 4.3 Section 4.3 Section 4.3

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APPENDIX I

COMPANY HISTORY

QUARTERLY REPORT

PREVIOUS	Company			Quarto	r / 1						
Starting Co	Consulting Fees										
Beginning Cash	Beginning Cash 400.000				Total Market Potential @ \$ 2,000						
Matured A/R @ par		Market Researchone region @ 30,000									
From Past Factoring		Operatir	ng Cost	-wided Co	pacity ()				
Total Available Cash	Total Available Cash 400,000				b. ()				
		Industry	r R & D c	exppas	t year (·				
Current Factoring	Requirements	% of Ind	lustry sa	ilespac	t year		,				
Cash	Factoring Expense		onsulting			·					
@ 90% Block 2			Pı	roduction	ı						
Block 3		Units Sc			5						
@ 80% Block 4	***************************************	UILUB SC	neduted								
Block 5				Market							
Factored A/R		Indicate	desired	locatio	n of eac	h salesn	ian				
Factor Expense		with an purchase	X. Ente	er pages gion in t	of adver	rtising priate t	ox.				
			Tot	al Pages	of Ads						
Disburse	ments		1				[]				
Fixed Cost		1	< Pt	Ages of A	MVert181	ing —>					
Variable Cost (WIP)		1	2	3	7	8	9				
Sales Salaries	150.000	Urban	Urban	Urban	Rural	Ruppal	Rural				
-	150.000	4	5	6		11 11	12				
Salesman Hire	30,000	Urban	Urban	Urban	Rural	Rural	Rural				
R & D Expense		13	14	15	19	20	21				
Advertising Expense		Rural	Ruyal	Rural	Rural	Rrrad	Rural				
Consulting Fees	100 000	16	11117	18	22	V23	24				
Total Disburse	180,000	Rural	Rural	Rural	Urban	Urban	Urban				
Starting Cash Less Total Disbursements 2	.20 m		< Pa	ges of A	dvertisi	ng —>					
TOWAL DISOULS EMERICA Z	720,000	L									
P	LAYERS DO NOT WRI	TE BFLOW	TRIS LIN	E							
Total Sales	0	Accumula	ted R &	D		0					
Units in Inventory	Product	Improvem	ent		0						
Total Salesmen	Salesmen Lost in the Field										
Units in WIP	in training Block 2										
Accumulated Plant and	Block 3										
Construction	150,000	Bloci in hirin									
		14 MAN	8								

QUARTERLY REPORT

PREVIOUS	Company			Quarto	er // <u>2</u>		
Starting Co	sh Items		Con	sulting F	ocs.		
Beginning Cash	Total Market Potential @ \$ 2,000						
Matured A/R @ par		Mårket F	Research	one reg			
From Past Factoring		Operatir	ng Cost-	-enged Ca	apacity)
Total Available Cash	220,000	R & D in	nproved	sales Pro	ob.)
•		Industry	7 R & D	exppar	st year)
Current Factoring	Requirements	% of Ind	lustry s	nlespas	t year	e 2,000)
	Factoring	Total Co	nsultin	g Fees			
Cash	Expense						
@ 90% Block 2			P	roduction	<u>l</u>		
Block 3		Units Sc	heduled				
@ 80% Block 4					·•		
Block 5				Market			
Factored A/R		Indicate	desire	l locatio	n of eac	ch salesm	an
Factor Expense		with an purchase	X. Ente	er pages zion in t	of adver	rtising opriate b	nor.
		•	,	tal Pages		J	· · · · · · · · · · · · · · · · · · ·
Disburser	ments	·	الساء"	act refer	OI VITE	1	
Fixed Cost			< P€	ages of A	dvertis	ing —>	
Variable Cost (WIP)		1	2	3		8	
Sales Salaries	3.000				'	j j	9
Construction		Urban	Urban 5	Urban	Rural 10	Rumal 11	Rural
Salesman Hire				ĺ -			12
R & D Expense		Urban 13	Urban 14	Urban 15	Rural 19	Rural	Rural
Advertising Expense]			_	20	21
Consulting Fees		Rural 16	Rujial 117	Rural 18	Rural	Rical	Rural
Total Disburse	3,000]]		10	55	I V23	24
		Rural	Rural	Rural	Urban	Urban	Urban
Starting Cash Less Total Disbursements 7	17.000		< Pe	es of A	dvertisi	ng —	1
<u>A</u>	41,000						
PI	AYERS DO NOT WRI	TE BELOW	THIS LIN	E			
Total Sales	0	Accumula	ted R &	D		0	
Units in Inventory		Product :	Improvem	ent			
Total Salesmen	3						
Units in WIP	0	in training					
Accumulated Plant and	Block 2 Block 3						
Construction	150,000	Block					

QUARTERLY RECORD

PREVIOUS	Company	Quarter / 3						
Starting C	Cach Items	Consulting Fees						
Beginning Cash	217.000	Total Market Potential @ \$ 2,000						
Matured M/R @ par		Market Researchone region @ 30,000						
From Past Factoring		Operating Costadded Capacity @ 2,000						
Total Available Cash	217.000	R & D improved sales Prob. @ 5,000						
		Industry R & D exppast year @ 1,000						
Current Factorin	ng Requirements	% of Industry salespeat year @ 2,000						
Cash	Factoring Expense	Total Consulting Fees						
@ 90% Block 2		The all which are						
Block 3		Production						
@ 80% Block 4		Units Scheduled						
Block 5	-	Market						
Factored A/R	_	Indicate desired location of each salesman						
Factor Expense		with an X. Enter pages of advertising purchased by region in the appropriate box.						
		Total Pages of Ads						
Disbure	sements							
Fixed Cost		< Pages of Ad ertising →						
Variable Cost (WIP)		1 2 3 7 8 9						
Sales Salaries	3.000	Urban Urban Rural Rupal Rural						
Construction		4 5 6 10 11 12						
Salesman Hire		Urban Urban Urban Rural Rural Rural						
R & D Expense		13 14 15 19 20 21						
Advertising Expense		Rural Rural Rural Rural Rural						
Consulting Fees		16 11 17 18 22 V23 24						
Total Disburse	3.000	Rural Rural Urban Urban Urban						
Starting Cash Less Total Disbursements	214.000	Pages of Advertising>						
	THE AVERDA NO. 1007 1007	ITE BELOW THIS LINE						
Made 1 Calles								
Total Sales		Accumulated R & D						
Units in Inventory		Product Improvement						
Total Salesmen	<u> </u>	Salesmen Lost in the Field in training						
Units in WIP	<u>*</u>	Block 2						
Accumulated Plant an Construction	150,000	Block 3 Block 4						

CUARTERLY REPORT

PREVIOUS	Company	Quarter / 4						
Starting C	Consulting Fees							
Beginning Cash	Beginning Cash 214 000			Total Market Potential @ \$ 2,000				
Matured A/R @ par	241,000	Market Re					·	
From Past Factoring		Operating	g Cost	added Ca	pacity @)	
Total Available Cash	214,000	R & D 1m			-			
)		
Current Factorin	g Requirements	% of Indi	ust ry sn	uenpas	t year @)	
Cash	Factoring Expense	Total Con	nsulting	g Fees				
2 90% Block 2			D.	oduation				
Block 3				roduction				
@ 80% Block 4		Units Sch	heduled		4			
Block 5				Market				
Factored A/R	_	Indicate	desired	locatio	n of eac	h salesm	an	
Factor Expense	_	with an 1	X. Ente	r pages	of adver	tising		
I de tot Expense	***************************************	purchased	,1			priate b	ox.	
Disburs	ements		Tot	al Pages	of Ads	,		
Fixed Cost	6.000		< Po	uges of A	dvertisi	ng —>		
Variable Cost (WIP)								
Sales Salaries	3.000	1	2	3	7	8	9	
Construction		Urban	Urban	Urban	Rural	Runal	Rural	
Salesman Hire		4	1 5	6	10	11	12	
R & D Expense		Urban	Urban	Urban	Rural	Rural	Rural	
Advertising Expense		13	14	15	19	20	21	
Consulting Fees		Rural	Ruyal	Rural	Rural	River	Rural	
Total Disburse	21,000	16	1117	18	22	I V23	24	
		Rural	Rural	Rural	Urban	Urbun	Urban	
Starting Cash Less	192 000		< Pe	uges of A	dvertisi	ng —>	1	
Total Disbursements	193,000	LJ						
	PLAYERS DO NOT WRI	TE BELOW	THIS LIN	TE .				
Total Sales	0	Accumula	ted R &	D		0		
Units in Inventory	4	Product	Improver	ient		O		
Total Salesmen Lost in the Field								
Units in WIP	in tra							
Accumulated Plant an	Bloc	k ?						
Construction	150,000	Bl.oc	k "					

CUARTERLY RECORT

PREVIOUS	Company	Quarter # 5					
Starting Cosh Ite	Consulting Fees						
Beginning Cash 193	.000	Total Ma	arket Po	tential	(. \$ 2,000	o
Matured A/R @ par		Market I	Research	one re			o
From Past Factoring		Operatin	ng Cost-	-added Ca	ipacity ()
Total Available Cash 193	000	R & D ir	nproved	anles Pro	o b. (n
		Industry	7 R & D	exppac	it y ar (
Current Factoring Requ	Irements	% of Inc	dustry s	alespac	st year (•	
Cash Ex	etoring opense		nsultin				
2 90% Block 2			P	roduction	1		
Block 3		Units 3c	heduled		5		
Block 5							
Factored A/R				Market			
Factor Expense		with an	X. Ente	i locatio er pages gion in t	of adver	rtising	-
Disbursements			1 Tot	tal Pages	of Ads		
	000	1	< P€	ages of A	dvertisi	ng —>	
Variable Cost (WIP) 12.	000	\ 		1.6			
Sales Salaries 3.0	000	X 1	XOs	X 3		8	9
Construction		Urban 4	Urban	Urban	Rural	Rumal 11	Rural
Salesman Hire		λ	Х' 🤄	X 6	10		12
R & D Expense		Urban 13	Urban 14	Urban 15	Rural 19	Rural	Rural
Advertising Expense 3.0	00_					20	21
Consulting Fees		Rural 16	Ruy 1 17	Rural 18	Rural 22	Ricel V23	Rural
Total Disburse 24.0	00_		Ĭ.	;			24
Stanting Seek Loop		Rural	Rural	Rural	Urban	Urban	Urban
Starting Cash Less Total Disbursements 169	000		< Pe	uges of A	d ve rtis <u>i</u>	ng —>	.
		L				!	
PLAYERS DO NOT WRITE BELOW THIS LINE							
Total Sales		Accumula	ted R &	D		0	
Units in Inventory		Product :	Improvem	ent		0	
Total Salesmen	3	Salesmen	Lost in	the Fiel	1.d		
Units in WIP	in training Block 2						
Accumulated Plant and	£0.000	Block	k 3				
Construction	0.000	Block	ic it				

CUARTERIX REPORT

PREVIOUS	Company	Quarter // 6				
Starting Con	h Items	Consulting Fees				
Beginning Cash	169,000	Total Market Potential @ \$ 2,000				
Matured A/R @ par		Market Research-one region @ 30,000				
From Past Factoring		Operating Costwided Capacity @ 2,000				
Total Available Cash	169,000	R & D improved sales Prob. @ 5,000				
=		Industry R & D exp past year @ 1,000				
Current Factoring	Requirements	% of Industry sales-spact year @ 2,000				
Cash	Factoring Expense	Total Consulting Fees				
② 90% Block 2		Production				
Block 3		Units Scheduled 5				
@ 80% Block 4		onrob benedated				
Block 5		Market				
Factored A/R		Indicate desired location of each salesman				
Factor Expense		with an X. Enter pages of advertising purchased by region in the appropriate box.				
Dishuman		1 Total Pages of Ads				
Disbursen		A — Pages of Advertising —>				
Fixed Cost	6.000	1 — Pages of Advertising —>				
Variable Cost (WIP)	2 200	1 1 2 1 3 3 7 8 9				
Sales Salaries	3.000	Urban Urban Rural Rugal Rural				
Construction	20.000	X 4 X 5 X (3) 6 10 11 12				
_	20.000	Urban Urban Rural Rural Rural				
R & D Expense	3,000	13 14 15 19 20 21				
Advertising Expense	3.000	Rural Ruyal Rural Rural Rural				
Consulting Fees	17 000	16 111 ₁₇ 18 22 V23 24				
Total Disburse	47,000	Rural Rural Urban Urban Urban				
Starting Cash Less Total Disbursements	22,000	< Pages of Advertising ->				
P	LAYERS DO NOT WRI	ITE BELOW THIS LINE				
Total Sales	3	Accumulated R & DO				
Units in Inventory	6	Product Improvement O				
Total Salesmen	5	Salesmen Lost in the Field				
Units in WIP	5	in training Block ?				
Accumulated Plant and Construction	150.000	Block 3 Block 1.				
		diring				

CUARTERLY REPORT .

PREVIOUS	Company	Quarter // 7					
Starting Cash	Itom::		Con	miting F	'eea		
Beginning Cash 12.	2,000	Total Ma	rket Pot	tential		8 \$ 2,00	D
Matured A/R @ par		Market I	Research-	one reg		@ 30 , 00	
From Past Factoring		Operatir	g Cost	-added Ca	ipacity (•	
Total Available Cash 12	2,000	R & D in	proved a	ales Pro)b. (છ 5 , 00	n
		Industry	R & D c	exppas	st year (
Current Factoring Ro	quirements	% of Ind	lustry se	ilespar	o vear	g 2,00	0
Cash	Factoring Expense	Total Co	onsul ti ng	g Fees			
≥ 90% Block 2			Pı	roduction	ı		
Block 3		Units Sc	_		: 5		
₹ 80% Block 4		On Co. Sc	neduted		_5		
				Market			
Factored A/R		Indicate	desired	llocatio	n of eac	ch sales	nan
Factor Expense	· · · · · · · · · · · · · · · · · · ·	with an	X. Ento	er pages gion in t	of adver	rtising	
Disbursemen	ts		2 Tot	al Pages	of Ads		
Fixed Cost 6	.000		< P€	uges of A	dvertis	ing ->	
Variable Cost (WIP) 15							
	.000	1	2	3	7	8	9
Construction		Urban	Urban	Urban	Rural	Rumal	Rural
Salesman Hire		1 "	1 5	6	1.0	111	12
R & D Expense		Urban	Urban	Urban	Rural	Rural	Rural
Advertising Expense 6	.000	13	14	15	19	20	X 21
Consulting Fees		Rural 16	Ru11 17	Rural	Rural	Rical	Rural
Total Disburse 32	.000			18	XQ22	X V23	XX 24
•		Rural	Rural	Rural	Urban	Urbun	Urban
Starting Cash Less Total Disbursements	0.000		< Pa	ges of A	iv ertisi	ng >	2
PLAYE	ERS DO NOT WRITE	TE BELOW	THIS LIN	E			
Total Sales	6	Accumula	ted R &	ח			
Units in Inventory	5	Product :				<u> </u>	
Total Salesmen	5	Salesmen	•			$\frac{3}{8}$	
Units in WIP	<u></u>	in tra	ining	MIG FAC.	· ~		
Accumulated Plant and Construction	150.000	Block Block Block	c 3				

CUARTERIX REPORT

Starting Cosh Item Beginning Cash 90.0	:1						
Beginning Cash 90.0	''	Consulting Fees					
	00	Total Market Potential @ \$ 2,000)•	
Matured A/R @ par		Market Re	esearch-	one reg	ton (30,000)
From Past Factoring		Operating	g Cost	-added Ca	pacity 6	2,000)
Total Available Cash 90.00	<u>00</u>	R & D imp	proved :	males Pre	ъ ъ. (5,000)
		Industry	R & D c	exppas	t year (1,000)
Current Factoring Requir	ements	% of Indi	ເລ ປະ y ົດ:	ulen -pas	t year @	2,000)
Cash Exp	oring onse	Total Cor	nsultine	g Fees			
≥ 90% Block 2			Pı	roduction	l		
Block 3		Units Sch	 heduled		.5		
@ 80% Block 4		01111	·ouuzcu				
Block 5 32,000 80	000			Market			
Factored A/R 32,000		Indicate					an
Factor Expense 8	000	with an X purchased	by ree	gion in t	he appro	tising priate b	ox.
Disbursements			2 Tot	al Pages	of Ads		
Fixed Cost 6.0	\sim		< Po	uges of A	dvertisi	ng →	
Variable Cost (WIP) 15.0							
Sales Salaries		1	2	3	7	8	9
Construction 30, C		Urban	Urban	Urban	Rural	Runal	Rural
Salesman Hire		4	5	. 6	1.0	11	12
R & D Expense		-	Urban	Urban	Rural	Rural	Rural
Advertising Expense 6.0	00	13	14	15	19	20	X 21
Consulting Fees	Milbil.		Ryy 1	Rural	Rural	Mrst	Rural
Total Disburse 620	00	16 Rural	TII 17 Rural	18 Rural	X 22 Urban	AX Φ_{53}	X 24 Urban
Starting Cash Less Total Disbursements	<u>xx</u>		< Pa	ges of A	ivertisi	ng —>	2
PLAYERS I	O NOT WRIT	TE BELOW T	HIS LIN	E			
Total Sales	4	Accumulat	ed R &	D		0	
Units in Inventory	6	Product I				Ö	
Total Salesmen	5	Salesmen			ld _		
Units in WIP	5	in trai	ning			X	
Accumulated Plant and Construction 180	2.000	Block Block Block	3				

CUARTERLY RESPORT

PREVIOUS	Company	Quarter # 9				
Starting Co	th Items	Consulting Fees				
Beginning Cash	28.000	Total Market	Potential	(0 \$ 2,000	c
Matured A/R @ par		Market Reseas	chone re			0
From Past Factoring	32.000	Operating Con	stwided C	apacity (0
Total Available Cash	60.000	R & D improve	ed sales Pr	o b. (۔ 9,00رو	
-		Industry R &	D екрра	st year (2 1,00	0
Current Factoring	Requirements	% of Industry	r salespa	ct yea r (9 2, 000	0
9)	Factoring	Total Consult	ing Fees			
2 905 Block 2	Expense					
Block 3			Production	<u>n</u>		
2 80% Block 4		Units Schedul	.ed	_ 5_		
Block 5			Ma who A			
Factored A/R		*	Market	_		
Factor Expense		Indicate desi with an X. E	nter pages	of adver	tising	
		purchased by			priate t	ox.
Disbursen	ents		Total Page:	of Ads		
Fixed Cost	6,000	<	Pages of	Mvertisi	ing —>	
Variable Cost (VIP)	5 000	I				L
Sales Salaries	5.000	1	2 3	7	8	9
Construction		Urban Urba		Rural	Runal	Rural
Salesman Hire		"	5 6	10	11 11	12
R & D Expense		Urban Urba	The species with	Rural	Rural	Rurel
Advertising Expense	6 000	13	14 15	XX	XÃ	21
Consulting Fees		Rural Ruya		Rural	Rical	Rural
Total Disburse	3 2 000	16 111	17 18	X ss	V 23	24
=	72.00	Rural Rura	l Rural	Urban	Urbun	Urban
Starting Cash Less	9 000	<	- Pages of /	dvertisi	ng 🚤	2
Total Disbursements 2	18,000		J			2
PL	AYERS DO NOT WRITE	E BELOW THIS	LINE	~		
Total Sales	4	Accumulated R	& D			
Units in Inventory	7	Product Impro			<u> </u>	
Total Salesmen	5	Salesmen Lost		1.d		
Units in WIP	5	in training			0	
Accumulated Plant and		Block 2 Block 3			<u>ŏ</u>	
Construction	180,000	Block 4			8	

GUARTERIX REPORT

PREVIOUS	Company	Outrler / 10					
Starting Cook	1 Itoms	Consulting Fees					
Beginning Cash 2	B.000	Total Mo	arket Po	tentint		s \$ 2. 000	0
Matured A/R @ par 4	0.000						·
From Past Factoring				-colded Ca	_	•)
Total Available Cash 6	8.000			sales Pro		9,000	
-				exppar			
Current Factoring F	Requirements				-	-	,
Cash	Factoring syponse	Total Co			•	•	
€ 90% Block 2			_				
Block 3			_	roduction	1		
@ 80% Block 4		Units So	heduled		10		
Block 5				Market			
Factored A/R		Indicate	dostre	locatio	m of on	.h ==1===	
Factor Expense		with an	X. Ente	er pages	of adver	rtising	
- wo oot sapenos		purchase	d by re	gion in t	he appro	opriate t	oox.
Disburseme	ents		4 To	tal Pages	of Ads		
Fixed Cost	6.000	1	Pi	ages of A	dvertis	ing —	
Variable Cost (WIP) 1.		2					
	5.000	Ya	A _s	√ ³	7	8	9
Construction	2,000	Urban	Urban	Urban	Rural	Runal	Rural
Salesman Hire		XA	X 5	Y 6	1.0	11 11	12
R & D Expense		Urban	Urban	Urban	Rural	Rural	Rural
	2,000	13	14	15	19	20	21
Consulting Fees		Rural	Ruyal	Rumi	Rural	River	Rural
Total Disburse 3	8,000	16	1117	18	X 55	53	YY24
		Rural	Rural	Rural	Urban	Urbun	Urban
Starting Cash Less			< Po	uges of A	dvortici	200	2
Total Disbursements 30	.000	<u></u>		eBea or 14	uve: 0131	e	2
PLA	YERS DO NOT WRIT	TE BELOW	THIS LIN	10		~	_
Total Sales		Accumula					
Units in Inventory		Product :					
Total Salesmen	_	Salesmen			14		
Units in WIP	10	in tra	ining	VIII FAC.			
Accumulated Plant and		Bloci Bloci				<u> </u>	
	<u>180.000</u>	Block				- 8	

CUARTERIX REPORT

PREVIOUS	Company	Quarter // 11					
Starting C	och Items	Consulting Fees					
Beginning Cash	30.000	Total Ma	arket Po	tential		g \$ 2,00	0
Matured A/R @ par	30,000	Market 1	Research	one re			0
From Past Factoring		Operation	ng Cost-	-colded Co	ipacity (g 2,000	0
Total Available Cash	60,000	R & D ir	nproved	anles Pro	ъ. (g 5 ,00 0	ი
		Industry	y R & D (exppar	t year (9 1,000	0
Current Factorin	g Requirements	% of Ind	dustry s	alespas	t year (9 2,0 00	5
	Factoring	Total Co	onsultin	g Fees			
© 90% Block 2	Expense						
Block 3			P	roduction	<u>!</u>		
@ 80% Block 4		Units Sc	cheduled		10		
Block 5 40,00	0 10000						
Factored A/R 40000				Market			
	_	Indicate	desired Y Ente	l location representation in the contract of t	n of eac	h salesm	ian
Factor Expense	10,000	purchase	ed by rea	gion in t	he appro	priate t	ox.
54 - 3			3 Tot	tal Pages	of Ads		
Disburse	11		1 -				
•	14,400	1	< Pt	ages of A	avert181	ng —>]
Variable Cost (WIP)	7	1	2	3	7	8	9
Sales Salaries	4,000	Urban	Urban	Urban	Rural	Rumal	Rural
Construction		4	5	6	10	11 11	12
Salesman Hire		Urban	Urban	Urban_	Rural	Rural	Rural
R & D Expense	0.00		14	15	19	20	21
Advertising Expense	9.000	X13 Rural	Ruyal	Rural	Rural	Riral	Rural
Consulting Fees	10 100	16	1117	18	55	₩ ₂₃	24
Total Disburse	49,400	Rural	Rural	Rural	Urban	Urban	Urban
Starting Cash Less							0.04
Total Disbursements	10,600	3	< Pε	uges of A	dvertisi	ng —>	
			'				
	LAYERS DO NOT WRIT	E BELOW	THIS LIN	E			
Total Sales	6	Accumula	ted R &	D		0	
Units in Inventory	10	Product	Improvem	ent		0	
Total Salesmen	4	Salesmen		the Fie	1.d	0	
Units in WIP		in tra: Block	-		*******		
Accumulated Plant and Construction		Block	k 3				
	180.000	B 3.0c1	k 4				

CHARTERLY REPORT

PREVIOUS	Company	Quarter / 12				
Starting Co.	oh Itema	Consulting Fees				
Beginning Cash	10.600	Total Market Potential @ \$ 2,000				
,	20.000	Market Researchone region @ 30,000				
From Past Factoring		Operating Costwided Capacity @ 2,000				
Total Available Cash	70.000	R & D improved sales Prob. @ 5,000				
1		Industry R & D exppast year @ 1,000				
Current Factoring	hequirements	% of Industry sales must year @ 2,000				
Cash	Factoring Expense	Total Consulting Fees				
@ 90% Block 2		Production				
Block 3		Units Scheduled 10				
@ 80% Block 4		on ts scheduled				
Block 5		<u>Marke t</u>				
Factored A/R	•	Indicate desired location of each salesman				
Factor Expense		with an X. Enter pages of advertising purchased by region in the appropriate box.				
		3 Total Pages of Ads				
Disburse	ments	,				
Fixed Cost	14.400	< Pages of Advertising → 3				
Variable Cost (WIP)	22000	1 2 3 .7 .8 9				
Sales Salaries	4,000	Urban Urban Urban Rural Runal Rural				
Construction		14 5 6 Kurat Kurat Kurat 12				
Salesman Hire		Urban Uri Urban Rural Rural Rural				
R & D Expense		13 14 15 19 20 21				
Advertising Expense	9,000	Rural Ruyal Rural Rural Rycal Rural				
Consulting Fees		16 11 18 22 V23 24				
Total Disburse	49,400	Rural Rural Rural Urban Urban Urban				
Starting Cash Less	20 (20	< Pages of Advertising ->				
Total Disbursements	20,600					
	PLAYERS DO NOT WRO	ITE BELOW THIS LINE				
Total Sales	10	Accumulated R & D				
Units in Inventory	10	Product Improvement O				
Total Salesmen	A	Salesmen Lost in the Field				
Units in WIP	10	in training				
Accumulated Plant and	d	Block 2 Block 3				
Construction	180,000	Block 4				

CUARTERLY REPORT:

PREVIOUS	Company	Quarter #
Starting C	och Itomo	Consulting Fees
Beginning Cash	20,600	Total Market Potential @ \$ 2,000
Matured A/R @ par	40,000	Market Researchone region @ 30,000
From Past Factoring		Operating Costwided Capacity @ 2,000
Total Available Cash	60,600	R & D improved cales Prob. @ 5,000
		Industry R & D exppast year @ 1,000
Current Factorin	g Requirements	% of Industry salesport year @ 2,000
	Factoring	Total Consulting Fees
Cash ≥ 90% Block 2	Expense	
Block 3 9.00	0 1.000	Production
3 80% Block 14	1,000	Units Scheduled
Block 5 800	1 1000	
Factored A/R 17.00	-	<u>Market</u>
ractored N/R 17.00	<i>D</i>	Indicate desired location of each salesman with an X. Enter pages of advertising
Factor Expense	<u> 3.000</u>	purchased by region in the appropriate box.
		4 Total Pages of Ads
Disburse	ements	
Fixed Cost	<u>14,400</u>	- Pages of Advertising -> 4
Variable Cost (WIP)	22,000	1 2 3 7 8 Y 9
Sales Salaries	4,000	Urban Urban Urban Rural Rumal Rural
Construction		4 5 6 10 11 12
Salesman Hire		Urban Urban Urban Kural Rural Rural
R & D Expense		13 14 15 19 20 21
Advertising Expense	12,000	Rural Rural Rural Rural Rural
Consulting Fees		16 11 18 22 V23 24
Total Disburse	52,400	Rural Rural Rural Urban Urban Urban
Starting Cash Less		
Total Disbursements	8 200	< Pages of Advertising ->
•		
1	PLAYERS DO NOT WRI	TE BELOW THIS LINE
Total Sales	9	Accumulated R & D
Units in Inventory		Product ImprovementO
Total Salesmen	4	Salesmen Lost in the Field
Units in WIP	10_	in training Block ?
Accumulated Plant and		Block 3
Construction	180,000	Block 4

CUARTERIX REPORT

PREVIOUS	Company	Guarter # 14					
Starting Cas	th Items		Con	oulting F	'ees		
Beginning Cash	8.200	Total Market Potential @ \$ 2,000					
Matured A/R @ par	40.000	Market 1	Research	one reg		e 30 , 000	
From Past Factoring	17.000	Operatin	ng Cost-	-wided Ca	pacity (
Total Available Cash	65.200			gales Pro	•	g 5,000	
-				ок р, рас			
Current Factoring	Requirements			nlospac	•	•	
Cash	Factoring Expense		onsultin		•	, , , ,	
2 90% Block 2			10-	roduction			
Block 3 9,000	1,000		_	rviue croi	!		
@ 80% Block 4		Units So	cheduled		10		
Block 5.40,000				Market			
Factored A/R 49.000)	Indicato	desire	i locatio	n of eac	ch sales	nan
Factor Expense	11,000	with an purchase	X. Ente	er pages gion in t	of adve	rtising opriate l	oox.
Disbursen	anto		3 Tot	tal Pages	of Ads		
Fixed Cost /	1 100	2	Pr Pr	ages of A	dvorti e	Ing	
	7.400	3		ABCO OI N	MACI OTP	rug>	
Sales Salaries	2,000	X1	XX s	X 3	7	8	9
Construction	4,000	Urban	Urpan	Urban	Rural	Rujjal.	Rural.
Salesman Hire		Y 4	VV2	V.5	1.0	1111	12
R & D Expense		Urban	Grean	Urban	Rural	Rural	Rurel
Advertising Expense	9.000	13	14	15	19	20	21
Consulting Fees	7,000	Rural	Ryyal	Rural	Rural	Record	Rural
Total Disburse	9 400	16	11117	18	22	V23	24
Total Dispurse	7,400	Rural	Rural	Rural	Urban	Urbun	Urban
Starting Cash Less Total Disbursements	5.800		< Pe	iges of A	dvertisi	ng —>	
		نـــــــــا					
PL	AYERS DO NOT WRIT	TE BELOW	THIS LIN	TE	··		
Total Sales	11	Accumula	ted R &	D		0	
Units in Inventory	10	Product	Improvem	ent	 -	0	
Total Salesmen		Salesmen	Lost in	the Fiel	1.d	0	
Units in WIP	10	in tra	ining				
Accumulated Plant and Construction	180,000	Bloc Bloc Bloc	k 3				

CHARTERIX REPORT

PREVIOUS	Company	Guarter 15				
Starting C	och Items	Consulting Fees				
Beginning Cash	<u>5.800</u>	Total Market Potential @ \$ 2,000				
Matured A/R & par		Market Research one region @ 30,000				
From Past Factoring	49,000	Operating Costadded Capacity @ 2,000				
Total Available Cash		R & D improved sales Prob. @ 5,000				
		Industry R & D exppast year @ 1,000				
Current Factorin	g Regulrements	% of Industry salespast year @ 2,000				
	Factoring	Total Consulting Fee.				
Crish	Expense					
€ 90% Block 2		Production				
Block 3		Units Scheduled 10				
3 80% Block 4						
Block 5		<u>Market</u>				
Factored A/R	_	Indicate desired location of each salesman				
Factor Expense	_	with an X. Enter pages of advertising purchased by region in the appropriate box.				
		A Total Pages of Ads				
Disburs	ements	Total Pages of Mas				
Fixed Cost	14.400	- Pages of Advertising ->				
Variable Cost (WIP)	22.000	1 2 3 7 8 9				
Sales Salaries	4,000					
Construction		Urban Urban Urban Rural Runal Rural Rural				
Salesman Hire						
R & D Expense		Urban Urban Urban Rural Rural Rural				
-	12.000	$ X ^{13} X ^{14} X ^{15} ^{19} ^{20} ^{21}$				
Consulting Fees		Rural Ryral Rural Rural Ryral Rural				
Total Disburse	52 400	16 11117 X 18 22 V23 24				
•		Rural Rural Urban Urban Urban				
Starting Cash Less	1 100	A < Pages of Advertising ->				
Total Disbursements	400	<u></u>				
	PLAYERS DO NOT WRI	ITE BELOW THIS LINE				
Total Sales	8	Accumulated R & D				
Units in Inventory	12.	Product Improvement				
Total Salesmen	4	· · · · · · · · · · · · · · · · · · ·				
Units in WIP	10	Salesmen Lost in the Field				
Accumulated Plant an	nd	Block 2 Block 3				
Construction	180.000	Block 4				

CHARTERLY REPORT

PREVIOUS	Company	Gunrter # 16					
Starting Co.	h Itoma	Consulting Fees					
Beginning Cash	2.400	Total Market Potential @ \$ 2,00)		
Matured A/R e par	20.000	Market Re	esearch	one rec			n
From Past Factoring		Operating	g Cost-	-orlded Ca	ipacity (0
Total Available Cash	52,400	R & D im	proved :	oules Pro	ib. (9 ,00 0	
-		Industry	R & D o	ozppar	st year (® 1,000)
Current Factoring	Requirements	% of Indi	us byy sa	n'onpac	it year (
Cash	Factoring Expense	Total Con	nsulting	g Fees			
2 90% Block 2	******		ים	roduction			
Block 3				roduc cron			
@ 80% Block 4	-	Units Sch	neduled		·10		
Block 5				Market			
Factored A/R		Indicate	desired	locatio	on of eac	h sales	กลท
Factor Expense		with an X	C. Ente	r pages	of adve	rtising	
•		purchased	,			priate t	ox.
Disbursen	ients		Tot	al Pages	of Ads		
Fixed Cost 1	4 4 0 -		< P€	uges of A	dvertisi	ing>	
Variable Cost (WIP) 2					,		
Sales Salaries	4 000	X 3º	Χs	χ 3	7	8	9
Construction	,	Urban	Urban	Urban	Rural	Runa l	Rural.
Salesman Hire		X 4	X^{1-5}	Y 6	1.0	11	15
R & D Expense			Urban	Urban	Rural	Rural	Rural
Advertising Expense		13	14	15	19	20	51
Consulting Fees		Rural	Ruji 1	Rural	Rural	Rycyl	Rural
Total Disburse 7	0400	16	11117	18	X 22	Y V23	24
-		Rural	Rural	Rural	Urban	Ürbun	Urban
Starting Cash Less Total Disbursements	1 2 000		< Pe	ges of A	d ve rtisi	ng —>	
	12,000						
PL	AYERS DO NOT WRIT	TE BELOW T	HIS LIN	Œ			
Total Sales	3	Accumulat	ed R &	D		0	
Units in Inventory	19	Product I		_		<u> </u>	
Total Salesmen	4	Salesmen	-		1.d	0	
Units in WIP	10	in trai	ning				
Accumulated Plant and		Block Block					
Construction	180,000	Block					

GUARTERLY REPORT

PREVIOUS	Company	Guarter //				
Starting C	ash Items	Consulting Fees				
Beginning Cash	12,000	Total Market Potential @ \$ 2,000				
Matured A/R @ par	90,000	Market Researchone region @ 30,000				
From Past Factoring		Operating Costwided Capacity @ 2,000				
Total Available Cash	102.000	R & D improved sales Prob. @ 5,000				
		Industry R & D exppast year @ 1,000				
Current Factorin	g Requirements	% of Industry salespast year @ 2,000				
Cash	Factoring Expense	Total Consulting Fees				
₹ 90% Block 2		Production				
Block 3	-	Units Scheduled 7				
@ 80% Block 4						
Block 5		Market				
Factored A/R	<u>.</u>	Indicate desired location of each salesman				
Factor Expense		with an X. Enter pages of advertising purchased by region in the appropriate box.				
Disburse	ements	Total Pages of Ads				
Fixed Cost	14.400	- Pages of Advertising				
Variable Cost (WIP)						
Sales Salaries	4.000	$\left \begin{array}{c cccccccccccccccccccccccccccccccccc$				
Construction		Urban Urban Rural Rural Rural				
Salesman Hire	10.000	X X X				
R & D Expense		Urban Orban Urban Rural Rural Rural				
Advertising Expense						
Consulting Fees		Rural Rural Rural Rural Rural 16 17 18 , 22 V23 24				
Total Disburse	50,400	Rural Rural Rural Urban Urban				
Starting Cash Less Total Disbursements	51,600	< Pages of Advertising ->				
1	PLAYERS DO NOT WRIT	TE BELOW THIS LINE				
Total Sales	7	Accumulated R & D				
Units in Inventory	22	Product Improvement				
Total Salesmen		Salesmen Lost in the Field				
Units in WIP	7	in training Block 2				
Accumulated Plant and Construction	180.000	Block 3 Block 4				

CHARTERIX REPORT

<u>PREVIOUS</u>	Company			Gunrte	r // <u></u>	8	
Starting C	Soh Itoms		Cons	ulting F	ees		
Beginning Cash	51.600	Total Mo.	rket Pot	entint	6	\$ 2,000	
Matured A/R e par	40.000	Market Re	escarch-	-one reg	ion (30,000	
From Past Factoring		Operatin	g Cost	added Ca	pacity (3,000	
Total Available Cash	91.600	R & D im	proved a	ales Pro	b. (5,000	
		Industry	R & D c	жррав	t year (1,000	
Current Factorin	ng Requirements	% of Indi	ນລຽ ະນ ຸດຄ	deupha	t year (2,000	
	Factoring	Total Co	nsultine	Fees			
Cash	Expense						
@ 90% Block 2			Pr	nduction			
Block 3		Units Sci	heduled		8		
@ 80% Block 4							
Block 5				Market			
Factored A/R						ch salesm	an
Factor Expense		with an line purchase					ox.
		<u> </u>	,	al Pages			
Disburs	ements		31.00	ar rages	OI AGS		
Fixed Cost	14.400		< P€	uges of A	dvertis:	ing –	
Variable Cost (WIP)	15.400	1	5	3	7	8	9
Sales Salaries	5.000			_	1	1	1
Construction		Urban	Urban 5	Urban 6	Rural 10	Runal 11	Rural.
Salesman Hire					J	1	
R & D Expense		Urban 13	Urban	Urban	Rural 19	Rural 20	Rural 21
Advertising Expense	15.000	X	_ X8)	×15	j		
Consulting Fees		Rural 16	Runal 17	Rúral 18	Rural 22	Riveyl V23	Rural 24
Total Disburse	49 800	1 - 1	XØ		•		
		Rural	Rural	Rural	Urban	Urbun	Urban
Starting Cash Less Total Disbursements	1 1 ann	5	< Pt	iges of A	dvertis	ing —>	
Total Disoursements	71,000	لــــا					
	PLAYERS DO NOT WRI	ITE BELOW	THIS LIN	TE	- 		
Total Sales	13	Accumula	ted R &	D		0	
Units in Inventory	16	Product	Improven	nent		0	
Total Salesmen	5	Salesmen	Lost in	the Fie	J.d	0	
Units in WIP	8	in tra Bloc					
Accumulated Plant as		Bloc					
Construction	180,000	Bl.oc					

CUARTERLY REPORT

PREVIOUS	Company	Guarter 19	
Starting Cool	h Items	Consulting Fees	
Beginning Cash	41.800	Total Market Potential @ \$ 2,000	
Matured A/R @ par 11		Market Research-one region @ 30,000	
From Past Factoring		Operating Costwided Capacity @ 2,000	
Total Available Cash \overline{I}	51.800	R & D improved sales Prob. @ 5,000	
		Industry R & D exp past year @ 1,000	
Current Factoring	Requirements	% of Industry salespast year @ 2,000	
Cash	Factoring Expense	Total Consulting Fees	
€ 90% Block 2		Direct control on	
Block 3		Production	
@ 80% Block 4		Units Scheduled	
Block 5		Market	
Factored A/R		Indicate desired location of each salesman	
Factor Expense		with an X. Enter pages of advertising	
rac cor inspends		purchased by region in the appropriate box.	
Disbursem	ents	Total Pages of Ads	_
Fixed Cost 4	4.400	< Pages of Advertising →	
Variable Cost (VIP) 1	7.600	T	_
	5.000	1 2 3 7 X 3 8 X 9	<u>'</u>
Construction	5,000	Urban Urban Urban Rural Runal Rural	
Salesman Hire		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>'</u>
R & D Expense		Urban Urban Rural Rural Rural	_
Advertising Expense 1	2 000	13 14 15 19 20 21	1
Consulting Fees	~. ~ ~ ~ ~	Rural Rural Rural Rural Rural	_
Total Disburse 4	9 000	16 11 17 18 22 V23 24	1
iouai bisourse II	7,000	Rural Rural Urban Urban Urban	
Starting Cash Less	00 -	< Pages of Advertising ->	
Total Disbursements 10	12,800	- Tages of March of Sing	
PL	AYERS DO NOT WRI	UTE BELOW THIS LINE	
Total Sales	8	Accumulated R & D	
Units in Inventory	16	Product ImprovementO	
Total Salesmen	5	Salesmen Lost in the Field	
Units in WIP	9	in training	
Accumulated Plant and	100	Block 2 Block 3	
Construction	180,000	Block 4	

APPENDIX II

QUARTERLY REPORT

QUARTERLY REPORT

PREVIOUS Company		Quarter	No. 20
Starting Cash	 	Consulting Fees	
Beginning Cash	102,800	Total Market Potential @ \$2,000	
Matured A/R @ \$10,000	80,000	Individual Potential-	· · · · · · · · · · · · · · · · · · ·
Previous Factored A/R	<u> </u>	Region @ \$30,000/Region	
Total	182,800	Percent of Industry Sales @ \$2,000	
Current Factoring Cash to	Factor-	Cost of New Line(s) @ \$2,000	***************************************
be Realized	ing Expense	Industry R & D Expenditure @ \$1,000	
A/R Block 2 @ 90%		Improved Sales Probability	
A/R Block 3 @ 90%		@ \$5,000 Total	
A/R Block 4 @ 80%		Total	
A/R Block 5 @ 80%		Production	
Total Factored A/R		Units Scheduled	·
Total Factoring Expense		Production Line Scrapped	
Disbursements		Units Sold	
Fixed Cost		Units in Inventory	
Variable Cost @ \$		Units in Work in Progress	
Construction @ \$			
Sales Salaries @ \$1,000		R & D	
Salesmen Hired		Accumulated R & D	
@ \$10,000 R & D Units		Product Improvement Achieved	
@ \$5,000 Pages of Ads			Yes No
© \$3,000			
Consulting Fees Total			
1000		1	

Market														
Indicate the concustomer's box appropriate box	Indicate	n salesman by the pages of	y placing a f advertisi	n "X" in th ng per regi	ne appropris	ate								
	←	Pages of	Advertising	·>										
1 Urban	Urban	3 Urban	7 Rural	Rural	9 Rural									
Urban	5 Urban	Urban	10 Rural	Rural	12 Rural									
13 Rural	14 Rural	15 Rural	19 Rural	20 Rural	21 Rural									
16 Rural	17 Rural	18 Rural	22 Urban	Urban	24 Urban									
Pages of Advertising														
Salesmen Remaining														
Pre	evious Sales	smen												
Sa	Lesmen Hired	<u> </u>												
	Total			-										
Sa	lesmen Lost													
	Field													
	Block 2													
	Block 3													
	Block 4													
	Hiring													
	Total		•											
	Total R	emaining		:										

15 May 1963

51

TM-1088/001/00

APPENDIX III

GAME BOARD

Accounts Receivable	Production	Construc- tion	Salesmen
	16	2	ঝ
3	6		1
7			
13			
ω			

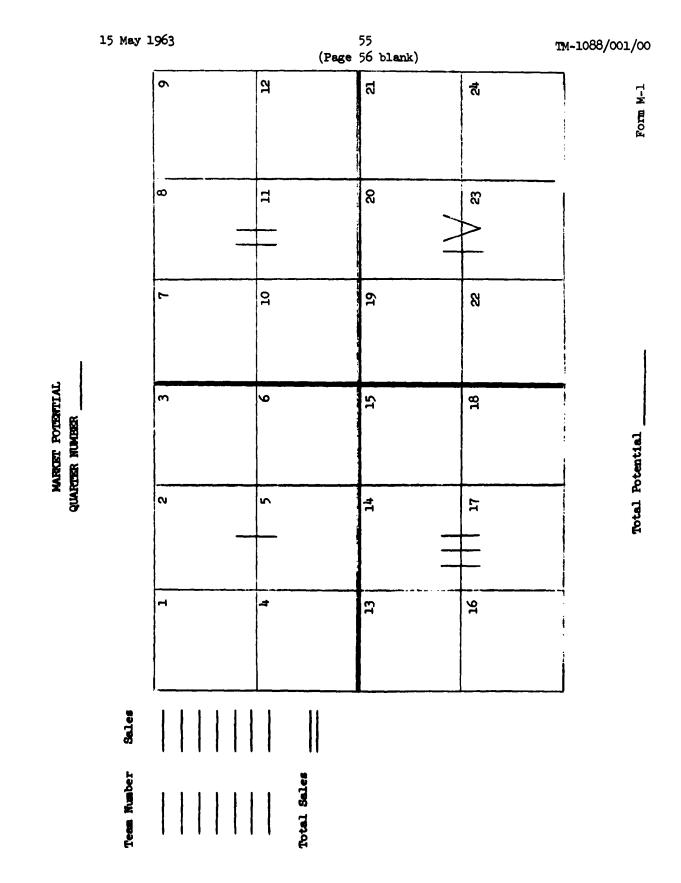
APPENDIX IV

MARKET FORM

15 May 1963

MARKET POTENTIAL QUARTER NUMBER

Team Number



Ly Nay 1.96/

57

1M-1088/001/00

APPENDIX V

CONSULTING FORMS

15 May 1963 98 TM-1088/001/00

TEAM NUMBER

THE TOTAL MARKET POTENTIAL IS _____UNITS

	T	EAM NUMBER			
THE BUYING P	OTENTIAL FO	R MARKET REGI	ON	IS DIST	RIBUTED
AS FOLLOWS:			•	<u> </u>	

60

15 May 1963

TM-1088/001/00

TEAM	NUMBER	

15	May	1963
~/		

61

TM-1088/001/00

TEAM NUMBER				
OPERATING COST FOR AN INITIAL PLANT PLUS	s		_	
PRODUCTION LINE(S) IS:				
EIVED COOM.				
FIXED COST:				
VARIABLE COST:	PER	UNIT	IN WI	P

TEAM	NUMBER	

HAVE BEEN SPENT ON R & D IN THE PAST YEAR.

15 May 1963

63 (Page 64 blank) TM-1088/001/00

TEAM NUMBER____

A PRODUCT IMPROVEMENT INCREASES THE PROBABILITY OF MAKING A SALE BY 10%.

TM-1088/001/00

APPENDIX VI

TABLES

TABLE I
RANDOM NUMBERS

66

57. 5.1	5	37	-		<u> </u>	. o		M 0	£ ;	*			F	.	7.	32	9		. m	+	70	- 21	14	2.4	μ Τ		0	r ∢	1	<u> </u>	E # P	٥,	ļ	35	12		, 	70	. .	= 5. 1.	- v		ا بر
939	44	30	æ 1	C ¥	2 4	2 6	:	7	7	2	; ;	•	6	2	¥	· s	č	2 5	. 0	-	7			3.8	ę N		e (ν κ	1	0	•	 	*	43	41	- 6	=	8	: ! '	, ,	E 0		. 72
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TABLE II
FACTORING - CASH & EXPENSE

BLO	80% CK 4 OR 5		F	90% BLOCK 1 OR 2	
UNITS FACTORED	CASH	EXPENSE	CASH	EXPENSE	UNITS FACTORED
1	8000	2000	9000	1000	1
2	16000	4000	18000	2000	2
3	54000	6000	27000	3000	3
Ţŧ.	32000	8000	36000	14000	ł ķ
5	40000	10000	45000	5000	5
6	48000	12000	54000	6000	6
7	5 6000	14000	63000	7000	7
8	64000	16000	72000	8000	8
9	72000	18000	81000	9000	9
10	80000	20000	90000	10000	10

TABLE III

FIXED AND VARIABLE COSTS (in hundreds of dollars)

				<u> </u>				1	訊	ट्र
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22			<u> </u>	<u>i</u>					<u> </u>	613
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	_				_		3288	8	_E	21 +
19							288 288	180 190	<u> 전</u>	7
18					_		88		31.6	207
17							800	7	<u> </u>	Si i
16							288 288	8	315	8
15		1		j	225	225	88	1.50	315	8
7.7					225	210	80	3	315	840
13	i				225	195	288	130	315	86
					225	180	288	82	315	720
11 12					225	165	288 288 288	91	315	8
10	!		7.	8	225 225 225 225	135 150 165 180 195 210	288 288 288	900 100 110 120 130 140 150 160 170	315	8
6	 }		171 771 177	8	225	135	887	8	315	210
ဘ			7	176 198 220	225	120	588	8	315	8
			111	154	22,	105		700	315	120
9			पता पता पता पत	132	225	8	288	89	315	360
: 5	8	0,	1 1 1	110	525	82	588	20	315	8
4	8	20:150	7		225		88	 Ş	315	9
М	8	8	4	999	225	150	88	8	315	8
2	8	8	77	Ot 1	25/	8	888	8	315	82
-	900	300 600 900 12	र क्तर क्तर क्तर	751 251 011 088 099 044 022	25 [2	150 300 450 600 750 900 105	388	100 200, 300 400 500 600 700 800	315	600 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 102 108 114 120 126 132 138 144 150
0	009 009 009 009 009		1441		225 225 225 225 225 225 225	0	288 288 288 288 288 288 288		315 315 315 315 315 315 315 315 315 315	0
	٦	0 a ,		9	 			0		
Units in Prod- WIP uction Facilities	Fixed Cost	Variable Cost	Fixed	Kartable	Fixed Cost	Variable Cost	Fixed Cost	Variable Cost	Fixed	Variable Cost
Prod- uction Facili	 			<u> </u>	,			<u> </u>		·····

TABLE IV
PROBABILITY OF PRODUCT IMPROVEMENT

ACCUMULATED R & D	IMPROVEMENT PROBABILITY
5,000	0
10,000	0
15,000	0
20,000	2
25,000	Ĭţ.
30,000	7
35,000	11
40,000	15
45,000	18
50.000	20
over 50,000	20

73

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TABLE V

INCREASE IN SALES PROBABILITY

DUE TO ADVERTISING

PAGES OF ADS	INCREASE IN SALES PROBABILITY
0	0
1	Į.
22	10
3	17
ц.	23
5	27

75

15 May 1963

TM-1088/001/00

APPENDIX VII

Income Statement for Quarter		
Sales		\$
Cost of Goods Sold		
Beginning Inventory		
Production + \$		
Total Available	\$	
Ending Inventory	- \$	•
Total Cost of Goods Sold		- \$
Gross Margin		\$
Expenses		
Sales Salaries	\$	
Salesmen Hire	*	
R & D	\$	
Advertising	*	
Consulting	\$	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		
Net Profit		\$
Statement of Position Beginning Quarter 1	=	
Assets		
Cash	+400,000	
A/R	\$	
Inventory	\$	
Plant	\$	
Total		\$400,000
Equity		400,000

Income Statement for Quarter 1		
Sales		\$
Cost of Goods Sold		
Beginning Inventory \$		
Production + \$		
Total Available	<u> </u>	
Ending Inventory	\$	
Total Cost of Goods Sold		- \$
Gross Margin		\$
Expenses		
Sales Salaries	\$	
Salesmen Hire	<u> 30,000</u>	
R & D	<u> </u>	
Advertising	\$	
Consulting	\$	
Factoring	<u> </u>	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 30,000
Loss Net Dodie		(130,000)
Statement of Position Beginning Quarter 2	<u> </u>	
Assets		
Cash	\$ <u>720,000</u>	
A/R	\$	
Inventory	\$	
Plant	\$ <u>150,000</u>	
Total		<u> \$370,000</u>
Equity		370,000

Income Statement for Quarter 2		
Sales		\$
Cost of Goods Sold		
Beginning Inventory \$		
Production + \$		
Total Available	\$	
Ending Inventory	\$	
Total Cost of Goods Sold		- \$
Gross Margin		\$
Expenses		
Sales Salaries	\$ 3,000	
Salesmen Hire	<u> </u>	
R & D	*	
Advertising	*	
Consulting	<u> </u>	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 3,000
Lots Net Back		(3.000)
Statement of Position Beginning Quarter 3	-	
Assets		
Cash	<u> </u>	
A∕ R	<u> </u>	
Inventory	<u> </u>	
Plant	\$ <u>150,000</u>	
Total		\$367,000
Equity		\$ <u>367,000</u> \$ <u>367,000</u>
adar A		<u> </u>

Income Statement for Quarter 3		
Sales		\$
Cost of Goods Sold		
Beginning Inventory \$		1
Production + \$		
Total Available	\$	
Ending Inventory	- \$	
Total Cost of Goods Sold		- \$
Gross Margin		\$
Expenses		
Sales Salaries	3,000	!
Salesmen Hire	\$	
R & D	<u> </u>	
Advertising	<u> </u>	
Consulting	!	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 3,000
Loss Net Costs		(\$ 3,000)
		(===,
Statement of Position Beginning Quarter 4	_	
Assets		
Cash	1214,000	
A/R	\$	
Inventory	<u> </u>	ı
Plant	150,000	'
Total		364,000
Equity		1364,000

Income Statement for Quarter	
Sales	\$
Cost of Goods Sold	
Beginning Inventory \$	_
Production + \$ 18,00	<u>o</u>
Total Available	<u> </u>
Ending Inventory	- \$ <u>18,000</u>
Total Cost of Goods Sold	- \$ <u> </u>
Gross Margin	\$ O
Expenses	
Sales Salaries	<u> 1000</u>
Salesmen Hire	\$
R & D	\$
Advertising	\$
Consulting	\$
Factoring	\$
Writeoff of Scrapped Inventory Lines	\$
Total	- <u>\$ 3,000</u>
Loss Net Profit	(<u>* 3,000</u>)
Statement of Position Beginning Quarter	<u>5</u>
Assets	
Cash	\$ <u>193,000</u>
A ∕R	\$
Inventory	18.000
Plant	<u>150,000</u>
Total	\$361,000
Equity	<u> 361,000</u>

Sales	Income Statement for Quarter 5		
Beginning Inventory	Sales		\$ <u>40,000</u>
### 18,000 Total Available ### 36,000 Ending Inventory - ### 18,000 Total Cost of Goods Sold - ### 18,000 Gross Margin ### 222,000 Expenses ### 3,000 Sales Salaries ### 3,000 Salesmen Hire ### ### 3,000 Advertising ### 3,000 Consulting ### ### ### ### ### ### ### #	Cost of Goods Sold		
### Total Available ### 36.000 Ending Inventory - \$18.000 Total Cost of Goods Sold - \$18.000 Gross Margin #### \$21,000 Expenses #### \$3,000 Sales Salaries ####################################	Beginning Inventory \$ 18,000		
### Total Cost of Goods Sold	Production + \$ 18,000		,
### Total Cost of Goods Sold ####################################	Total Available		
# 122,000 Expenses Sales Salaries Salesmen Hire R & D Advertising Consulting Factoring Writeoff of Scrapped Inventory Lines Total Statement of Position Beginning Quarter 6 Assets Cash A/R Inventory Flant 150,000 *377.000	Ending Inventory	- \$ 18,000	
Sales Salaries	Total Cost of Goods Sold		- \$ 18.000
Sales Salaries 3.000	Gross Margin		<u> </u>
Salesmen Hire R & D Advertising Consulting Factoring Writeoff of Scrapped Inventory Lines Total Statement of Position Beginning Quarter 6 Assets Cash A/R Inventory Plant 150,000 \$377,000	Expenses	_	
Advertising \$3.000 Consulting \$3.000 Factoring \$4.000 Writeoff of Scrapped Inventory Lines \$4.000 Statement of Position Beginning Quarter 64. Assets Cash \$169.000 A/R \$40.000 Finat \$150.000 *377.000	Sales Salaries		
Advertising Consulting Factoring Writeoff of Scrapped Inventory Lines Total	Salesmen Hire	<u> </u>	
Consulting Factoring Writeoff of Scrapped Inventory Lines Total Statement of Position Beginning Quarter 6 Assets Cash A/R Inventory Flant Total *377.000	R & D	*	
Factoring Writeoff of Scrapped Inventory Lines Total Total Statement of Position Beginning Quarter 6 Assets Cash A/R Inventory Plant Total \$377,000	Advertising	•	
### Total - \$ 6,000 Net Profit	Consulting		
Total - \$ 6,000 Net Profit \$ 16,000 Statement of Position Beginning Quarter 6 Assets Cash \$ 169,000 A/R \$ 40,000 Inventory \$ 18,000 Plant \$ 150,000	Factoring		
Statement of Position Beginning Quarter 6	Writeoff of Scrapped Inventory Lines	\$	
Statement of Position Beginning Quarter 6	Total		- \$_6,000
Assets Cash \$169,000 A/R \$40,000 Inventory \$18,000 Plant \$150,000 Total \$377,000	Net Profit		<u>16000</u>
Cash \$169,000 A/R \$40,000 Inventory \$18,000 Plant \$150,000 Total \$377,000	Statement of Position Beginning Quarter	<u> </u>	
A/R \$ 40,000 Inventory \$ 18,000 Plant \$ 150,000 Total \$ 377,000	Assets		
Inventory \$ 18.000 Plant \$ 150.000 Total \$ 377.000	Cash	· ·	
Plant \$150,000 Total \$377.000	A∕R	•	
Total \$377.000	Inventory		
	Plant	*150,000	
	Total		±377.000
	Equity		

Form F-1

Income Statement for Quarter 6		
Sales		\$ 30,000
Cost of Goods Sold		
Beginning Inventory \$ 18,000		
Production + \$ 21,000		
Total Available	\$ 39,000	
Ending Inventory	- \$ <u>26,000</u>	
Total Cost of Goods Sold		- \$ 13,000
Gross Margin		\$ 17.000
Expenses		
Sales Salaries	\$ 3,000	
Salesmen Hire	\$20,000	;
R & D	\$	
Advertising	\$ 3.000	
Consulting	\$	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$26,000
Loes Net Profit		(\$ 9.000)
		(
Statement of Position Beginning Quarter 7		
Asseta		
Cash	\$122,000	
A∕R	1 70,000	
Inventory	\$ 26,000	
Plant	\$150,000	
Total		:368,000
Equity		:368,000

Income Statement for Quarter		
Sales		\$ 60,000
Cost of Goods Sold		
Beginning Inventory \$ 26.000		
Production + \$ 21,000		
Total Available	<u> </u>	
Ending Inventory	- \$ <u>15,700</u>	
Total Cost of Goods Sold		- \$ 31,300 \$1.8,700
Gross Margin		\$ <u>18,700</u>
Expenses		
Sales Salaries	<u> 5,000</u>	
Salesmen Hire	<u> </u>	
R & D	*	
Advertising	\$ 6,000	
Consulting	\$	
Factoring	*	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$11,000
Net Profit		17 700
Statement of Position Beginning Quarter	-	
Assets		
Cash	<u> 90,000</u>	
A ∕R	<u> 100.000</u>	
Inventory	15.700	
Plant	<u> 150.000</u>	
Total		355,700
Equity		1355 700
		ANCOUNTY

Income Statement for Quarter 8		
Sales		\$ <u>40,000</u>
Cost of Goods Sold		
Beginning Inventory \$ 15.700		
Production + \$ 21,000		
Total Available	<u>\$ 36,700</u>	
Ending Inventory	- \$ <u>22,000</u>	
Total Cost of Goods Sold		- \$14,700
Gross Margin		\$25,300
Expenses		
Sales Salaries	\$ <u>5,000</u>	
Salesmen Hire	\$	
R & D	4	
Advertising	\$ 6,000	
Consulting	\$ 8,000	
Factoring	*	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 19,000
Net Profit		6,300
Statement of Position Beginning Quarter 9		
Assets		
Cash	\$ <u>60.000</u>	
A∕ R	\$60,000	
Inventory	\$ 22,000	
Plant	\$180,000	
Total		322,000
Equity		1322,000

Income Statement for Quarter 9		
Sales		\$40,000
Cost of Goods Sold		
Beginning Inventory \$22.000		
Production + \$21,000		
Total Available	<u> 43.000</u>	
Ending Inventory	- \$ <u>27,400</u>	
Total Cost of Goods Sold		- \$ 15600
Gross Margin		\$ <u>24 400</u>
Expenses		
Sales Salaries	\$ 5,000	
Salesmen Hire	\$	
R & D	\$	
Advertising	\$ <u>6.000</u>	
Consulting	\$	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		+11,000 +13,400
Net Profit		<u>13,400</u>
Statement of Position Beginning Quarter 1	<u>o_</u>	
Assets		
Cash	\$ 68,000	
A/R	\$ 60,000	
Inventory	<u> 27.400</u>	
Plant	180.000	
Total		\$ <u>33,5,400</u>
Equity		<u> 335,400</u>

Income Statement for Quarter 10		
Sales		\$60,000
Cost of Goods Sold		
Beginning Inventory \$27.400		
Production + \$ 21.000		
Total Available	\$ <u>48,400</u>	
Ending Inventory	- \$24,200	
Total Cost of Goods Sold		- \$24,200
Gross Margin		\$3.5 8cm
Expenses		
Sales Salaries	\$ 5,000	
Saleamen Hire	\$	
R & D	<u> </u>	
Advertising	12,000	
Consulting	\$	
Factoring	\$	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$17.000
Net Profit		*18'800
Statement of Position Beginning Quarter 11	=	
Assets		
Cash	\$ 60,000	
A/R	<u> </u>	
Inventory	\$ 24 200	
Plant	\$180,000	ļ
Total		\$354,200
Equity		\$ 354 200

Income Statement for Quarter		
Sales		\$ 60,000
Cost of Goods Sold		
Beginning Inventory \$ 24,200		
Production + \$ 36,400		
Total Available	60,600	
Ending Inventory	- \$ 37,900	
Total Cost of Goods Sold		- \$ <u>22,700</u>
Gross Margin		<u>\$ 37,300</u>
Expenses		
Sales Salaries	<u>4.000</u>	
Salesmen Hire	\$	
R & D	*	
Advertising	1,000	
Consulting	\$	
Factoring	*10.000	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$23.000
Net Profit		<u>14.300</u>
Statement of Position Beginning Quarter 12	<u>*</u>	
Assets		
Cash	<u>\$ 70,000</u>	
A∕R	\$ 80,000	
Inventory	<u>37.900</u>	
Plant	\$ <u>180.000</u>	
Total		367900
Equity		<u>367.9∞</u>

FormF-1

Income Statement for Quarter 12		
Sales		\$100.000
Cost of Goods Sold		
Beginning Inventory \$37,900		
Production + \$ 36,4-00		
Total Available	\$ <u>74.300</u>	
Ending Inventory	\$ <u>37.100</u>	
Total Cost of Goods Sold		- <u>\$ 37.200</u>
Gross Margin		\$ 62,800
Expenses		ļ
Sales Salaries	\$ <u>4.000</u>	
Salesmen Hire	\$	
R & D	\$	
Advertising	<u>\$ 9,000</u>	
Consulting	\$	
Factoring	<u> </u>	
Writeoff of Scrapped Inventory Lines	\$	
Total	•	\$ 13,000
Net Profit		\$ <u>49.800</u>
Statement of Position Beginning Quarter 13	-	
Assets		
Cash	\$ 60.600	
A∕ R	\$ <u>140.00</u> 0	
Inventory	<u>\$ 37,100</u>	
Plant	\$180.000	
Total		\$ <u>417.700</u>
Equity		·417 700
		-317.100
		

Income Statement for Quarter 13		
Sales		\$ 90,000
Cost of Goods Sold		
Beginning Inventory \$ 37,100		
Production + \$ 36,400		
Total Available	<u> </u>	
Ending Inventory	- \$ <u>40,40</u> 0	
Total Cost of Goods Sold		- \$ 33,100
Gross Margin		\$ 56,900
Expenses		
Sales Salaries	<u> 4.000</u>	
Salesmen Hire	<u> </u>	
R & D	*	
Advertising	\$12,000	
Consulting	\$	
Factoring	<u>\$ 3.0∞</u>	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 19.000
Net Profit		<u>37.900</u>
Statement of Position Beginning Quarter 14	<u> </u>	
Assets		
Cash	£ 65,200	
A/R	<u>\$170,000</u>	
Inventory	<u> 40,40</u> 0	
Plant	\$180,000	
Total		455,600
Equity		A55,600

Form F-1

Income Statement for Quarter 14	
Sales	\$110.00
Cost of Goods Sold	
Beginning Inventory \$ 40	<u>40</u> 0
Production + \$ 36.	400
Total Available	\$_76.8 00
Ending Inventory	- \$ <u>36,60</u> 0
Total Cost of Goods Sold	- \$40,200
Gross Margin	- \$ <u>40,20</u> 0 \$ 69,80
Expenses	
Sales Salaries	<u>4.000</u>
Salesmen Hire	\$
R & D	<u> </u>
Advertising	<u>\$ 9,000</u>
Consulting	<u> </u>
Factoring	<u>\$11.000</u>
Writeoff of Scrapped Inventory Lines	\$
Total	124.000
Net Profit	\$ <u>45_80</u>
Statement of Position Beginning Quar	ter <u>15</u>
Assets	
Cash	<u> 54.800</u>
A/R	\$220.000
Inventory	<u>36.60</u> 0
Plant	\$180.000
Total	*491.40 *491.40
	

Form F-1

Income Statement for Quarter 15		
Sales		\$80.000
Cost of Goods Sold		:
Beginning Inventory \$ 36.600		
Production + \$ 36,400		
Total Available	<u> 73.000</u>	
Ending Inventory	<u> 43.800</u>	
Total Cost of Goods Sold		- \$ 29,200
Gross Margin		150,800
Expenses		
Sales Salaries	<u>4.000</u>	
Salesmen Hire	\$	
R & D	-	
Advertising	12,000	
Consulting	ŧ	
Factoring	•	
Writeoff of Scrapped Inventory Lines	!	
Total	•	<u> 16,000</u>
Net Profit		±34,8∞
Statement of Position Beginning Quarter 16	=	
Assets		1
Cash	<u> 52.400</u>	
A ∕R	<u>250.000</u>	
Inventory	43.800	
Plant	\$180.000	
Total		\$526,200
Equity		\$526,200 \$526,200

Form F-1

Income Statement for Quarter 16		
Sales		<u>\$ 30,000</u>
Cost of Goods Sold		
Beginning Inventory \$_43.800		
Production + \$ 36,400		
Total Available	<u>180200</u>	
Ending Inventory	<u>\$ 69.300</u>	
Total Cost of Goods Sold		- \$ 10,900
Gross Margin		<u>\$19,100</u>
Expenses		
Sales Salaries	<u> 4.000</u>	
Salesmen Hire	4	
R & D	*	
Advertising	*	
Consulting	*	
Factoring	*	
Writeoff of Scrapped Inventory Lines	4	
Total		- <u>\$ 4,000</u>
Net Profit		• <u>4,000</u> • <u>15,100</u>
Statement of Position Beginning Quarter 17		
Assets		
Cash	\$ 102,000	
A/R	<u> 190.00</u> 0	
Inventory	\$ 69,300	
Plant	<u> 180.000</u>	
Total		\$541,300
Equity		\$541.300
•		

Income Statement for Quarter 17		
Sales		<u> </u>
Cost of Goods Sold		
Beginning Inventory \$ 69.300		
Production + \$ 36.400		
Total Available	<u> 105,700</u>	
Ending Inventory	+ <u>80,400</u>	
Total Cost of Goods Sold		- \$ 25,300 \$44,700
Gross Margin		44 ,700
Expenses		
Sales Salaries	<u> 4.000</u>	
Salesmen Hire	<u>\$_10,000</u>	
R & D	<u> </u>	
Advertising	*	
Consulting	!	
Factoring	<u> </u>	
Writeoff of Scrapped Inventory Lines	<u> </u>	
Total		- \$ 14.000
Net Profit		<u> 30,700</u>
Statement of Position Beginning Quarter 18		
Assets		
Cash	<u> </u>	
A/R	\$220,000	
Inventory	\$ 80,400	
Plant	<u> 180,000</u>	
Total		<u> 572,000</u>
Equity		\$ 572,000

Form F-1

Income Statement for Quarter 18		
Sales		\$130,000
Cost of Goods Sold		
Beginning Inventory \$ 80,400		
Production + \$ 29.800		
Total Available	\$110300	
Ending Inventory	- <u>\$ 60,80</u> 0	
Total Cost of Goods Sold		- \$ 49.400
Gross Margin		\$ 80,600
Expenses		
Sales Salaries	\$ 5.000	
Salesmen Hire	*	
R & D	*	
Advertising	<u> 15,∞0</u>	
Consulting	*	
Factoring	*	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 20.000
Net Profit		\$ 60,600
Statement of Position Beginning Quarter 19		
Assets		
Cash	<u> 151,800</u>	
A/R	\$ 240.000	
Inventory	\$ 60,800	
Plant	<u> 180.000</u>	
Total		* <u>617'600</u>
Equity		\$612.600
		سينين سين

Form F-1

Income Statement for Quarter 19		
Sales		\$80,000
Cost of Goods Sold		
Beginning Inventory \$ 60.800		
Production + \$ 32,000		
Total Available	<u> 92.800</u>	
Ending Inventory	- \$ <u>61,900</u>	
Total Cost of Goods Sold		- \$30,900
Gross Margin		<u>49,100</u>
Expenses		
Sales Salaries	<u> 5,000</u>	
Salemen Hire	*	
R & D	4	
Advertising	\$ 12,000	
Consulting	4	
Factoring	4	
Writeoff of Scrapped Inventory Lines	\$	
Total		- \$ 17.000
Net Profit		\$32,100
Statement of Position Beginning Quarter 20	2	
Assets		
Cash	\$ 182 800	
A ∕R	\$ <u>240.00</u> 0	
Inventory	\$ <u>61.900</u>	
Plant	180,000	
Total		464,700
Equity		\$664.700

Form F-1

UNCLASSIFIED

System Development Corporation, Santa Monica, California BUSINESS MANAGEMENT GAME, PART II INSTRUCTIONS FOR UMPIRES. Scientific rept., TM-1088/001/00, by S. Peterson, A. C. Martin. 15 May 1963, 95p.

Unclassified report

DESCRIPTORS: Management Engineering.

UNCLASSIFIED

Describes the operations to be performed by the umpires in the management game described in TM-1088/00/00.

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